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Missouri State Auditor

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## PUBLIC SAFETY

# Oversight of Amusement Ride Safety



## State's Under Funded Amusement Ride Safety Program Leaves Some Rides Operating Without Permits, Others Only Inspected Annually

This audit report addresses how well the state ensures the safety of amusement rides operating statewide in theme parks, traveling carnivals and other events. Missouri's Division of Fire Safety is charged with enforcing state amusement ride safety laws, which include investigating amusement ride accidents with injuries and ensuring annual safety inspections of rides. Auditors analyzed how well the division found rides operating without permits and conducted spot ride inspections. In addition, auditors compared Missouri's ride safety laws to other states. Highlights of the findings follow:

Amusement rides operating without permits	Auditors found 15 amusement ride companies operating rides (including go-carts, bumper boats, and a ferris wheel) without permits. Company representatives told auditors they did not know about the state permit law or failed to renew ride permits. Division staff said they have not received adequate funding to more fully monitor for rides operating without a permit. (See page 6)
Other states have stricter ride inspections	Auditors found 13 of 28 states reviewed require traveling rides to be inspected each time they are set up, while Missouri law only requires rides to be inspected once a year. About 830 portable rides, which traveled from carnival to carnival, operated in Missouri during fiscal year 2004. (See page 10)
Other states require more ride accidents reported	Several states (17 of 32) require accidents to be reported if medical attention beyond first aid is required, and some states require all accidents to be reported. Missouri law only requires accidents to be reported and documented if death or hospitalization occurs. (See page 11)
Inspectors not required to be independent of rides	State regulations do not require the inspectors hired by ride owners to be independent of the owner. Division staff said one amusement ride company owner inspects his own rides. (See page 11)
Spot inspections not focused on operational safety concerns	The division's inspection check list does not include evaluating ride operator and passenger requirements, such as the location of an operator when a ride is in use, or enforcement of passenger weight and height requirements. Division staff said they had not considered including ride operation issues in their inspection until fall 2004. At the October 2004 board meeting, a board member reported operation violations at the 2004 State Fair. (See page 6)



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Honorable Matt Blunt, Governor  
and  
Members of the General Assembly  
and  
Mark James, Director  
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Thousands of Missouri citizens are entertained on amusement rides annually. The Department of Public Safety's Division of Fire Safety (DFS) has responsibility for enforcing state amusement ride safety laws established to help protect citizens from unsafe rides. Review objectives included evaluating whether (1) improvements are needed in the management and oversight of DFS's amusement ride safety program and (2) DFS's program is as strict and inclusive as other state or other entity programs.

Improvements are needed in DFS's oversight of the program. DFS has not established adequate procedures to identify amusement rides operating without a state permit, performed adequate spot inspection procedures, or handled complaints and periodically informed local law enforcement and fire service agencies about reporting requirements. In addition, other states have enacted amusement ride safety laws more stringent than Missouri. We have included recommendations to improve the management and oversight of the amusement ride safety program.

We conducted our work in accordance with Government Auditing Standards issued by the Comptroller General of the United States. This report was prepared under the direction of Kirk Boyer, Director. Key contributors to this report were Pamela Tillery, Sharon Eagleburger, and Lori Melton.

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## Abbreviations

CPSC	Consumer Product Safety Commission
CSR	Code of State Regulations
DFS	Division of Fire Safety
NR	No Response
RSMo	Missouri Revised Statutes
SAO	State Auditor's Office

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# Amusement Ride Safety Program Deficiencies Need To Be Addressed

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Improvements are needed in the management and oversight of DFS's amusement ride safety program. This situation has occurred because DFS has not (1) adequately searched for amusement rides operating without a state permit, (2) established adequate spot inspection procedures, (3) developed adequate procedures for handling complaints and periodically informing local law enforcement and fire service agencies about reporting requirements, and (4) determined administrative and personnel costs and the adequacy of permit fees and staffing. In addition, Missouri's amusement ride safety laws are not as comprehensive as other states, which require portable rides to be inspected at each set up and require stricter reporting requirements for accidents and mechanical failures. As a result, the public's safety has not been adequately safeguarded.

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## Background

The Amusement Ride Safety Act was enacted in 1997 and required DFS to investigate any amusement ride accident resulting in a serious physical injury or death. The legislature amended the act in 2000 to require amusement ride<sup>1</sup> owners to obtain an annual safety inspection for each ride from a certified owner-hired inspector,<sup>2</sup> who is registered and approved by the division, and file a current certificate of insurance with a \$1 million minimum liability provision, prior to receiving a ride permit from DFS to operate in the state. An amusement ride safety inspection is to be conducted based on nationally recognized inspection standards, and manufacturer's recommendations and guidelines. Permits are issued by DFS after inspection and insurance requirements are met and the permit fee is paid.

In January 2005, new legislation<sup>3</sup> will require DFS to regulate dry slides over twenty feet in height, bungee cord attractions, and climbing walls over ten feet in height, in addition to the amusement rides defined in the current law. DFS will also be authorized to conduct spot inspections of any amusement ride without notice and require the owner or operator of a

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<sup>1</sup> Section 316.203, Missouri Revised Statutes (RSMo 2000), defines an amusement ride as any mechanical device that carries or conveys passengers along, around or over a fixed or restricted route or course or within a defined area for the purpose of giving its passengers amusement, pleasure or excitement. In addition, the current Code of State Regulations (CSRs) exempt unpowered, non-mechanical playground equipment which does not normally require the supervision or services of an operator.

<sup>2</sup> Amusement ride inspectors are required to be certified by the National Association of Amusement Ride Safety Officials or the American Industry Manufacturing and Suppliers, or possess a basic knowledge of the American Society for Testing and Materials requirements.

<sup>3</sup> House Bill 1403 expanded the Amusement Ride Safety Act in 2004.

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portable amusement ride<sup>4</sup> to file an itinerary with DFS no later than 15 days before the public operation of the ride.

As of June 30, 2004, DFS has approved 34 independent inspectors nationwide (five reside in Missouri) for ride owners to hire for annual inspections (i.e., owner-hired inspectors). DFS staff has not been assigned to regulate amusement ride safety on a full-time basis. Currently, an office clerk performs all clerical functions regarding operating permits and owner-hired inspector approvals, and two DFS inspectors perform spot inspections of amusement rides, under the supervision of the Assistant State Fire Marshal. DFS issued permits for 1,048 and 955 rides during fiscal years 2004 and 2003, respectively (see Appendix I).

The legislature established the Amusement Ride Safety Board<sup>5</sup> in 2000 to consult with amusement ride engineering authorities and organizations, to adopt a code of rules and regulations governing amusement rides, and to make recommendations to the State Fire Marshal concerning the board's findings on safety issues related to amusement rides.

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## Scope and Methodology

To evaluate the effectiveness of DFS's overall management of the amusement ride safety program, we interviewed the Assistant State Fire Marshal, other DFS staff, and officials from the National Association of Amusement Ride Safety Officials and the American Society for Testing and Materials.

We reviewed the Consumer Product Safety Commission's (CPSC) directory of state amusement ride safety officials report. This report documents the states that regulate amusement rides (see Appendix II), summarizes each state's laws and regulations including permit fees, required inspections, insurance requirements, and documents official contacts. We also reviewed the Saferparks ride incident database, which summarizes for each state the types of rides regulated, inspection requirements, and reporting requirements for accidents. Using these reports, we performed a comparison of Missouri's laws, regulations, and reporting requirements to other states.

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<sup>4</sup> Portable amusement rides are defined as those rides that are transported from location to location (traveling carnivals).

<sup>5</sup> Section 316.204, RSMo 2000, requires the Amusement Ride Safety Board to be comprised of nine members, one of whom shall be the State Fire Marshal or the marshal's designee, and the remaining eight members shall be appointed by the Governor. The appointed members consist of the following: three members shall represent the interests of small amusement ride businesses, three members shall represent the interests of fixed amusement ride parks, one member shall be a resident of the state, and the last member shall be a mechanical engineer knowledgeable of amusement rides.

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To obtain information on other states' amusement ride programs, we contacted nine states—Arkansas, Illinois, Iowa, Kansas, Kentucky, Nebraska, North Carolina, Oklahoma, and Tennessee—to discuss regulations, procedures and staffing, and to validate information obtained from the CPSC report and Saferparks database. We also contacted St. Louis County to identify and discuss local laws and procedures for amusement rides.

We reviewed DFS's amusement company files to ensure operating permit applications, owner hired inspections, and certificates of insurance had been documented for each amusement company. We also reviewed DFS inspector files to ensure all inspectors had been certified or possessed a basic knowledge of the American Society for Testing and Materials requirements. In addition, we performed a site visit to the State Fair with DFS inspectors to review spot inspection procedures. We performed additional site visits at fairs and carnivals to ensure portable amusement ride companies had rides licensed with DFS and to review each company's compliance with state laws and regulations.

To identify amusement ride companies operating rides without a permit, we compared the DFS records of permitted companies from 2003 to 2004, reviewed various phone books throughout the state, reviewed local sales tax records, and contacted each county to request a listing of amusement ride companies used at county fairs. To further identify rides not permitted, we obtained a listing of amusement companies from the Amusement Business periodical to ensure companies located in Missouri had obtained permits. We also contacted an insurance company specializing in amusement rides and obtained a listing of insured companies that had been located or operated portable rides in Missouri. From this listing, we verified licensure with the state and contacted any companies operating rides that had not been licensed.

To evaluate the staffing needs and permit and inspection fees of the amusement ride safety program, we reviewed the House Bill 1403 fiscal note and DFS's fiscal year 2006 budget request.

We requested comments on a draft of our report from the Director of Public Safety, and those comments and our evaluation are reprinted in Appendix III. We incorporated their comments as appropriate. We conducted our work between August and November 2004.

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## Weaknesses in Amusement Ride Oversight

Improvements are needed because DFS has not (1) adequately searched for amusement rides operating without a state permit, (2) established adequate spot inspection procedures, (3) developed adequate procedures for handling complaints and periodically informing local law enforcement and fire service agencies about reporting requirements, and (4) determined administrative and personnel costs and the adequacy of permit fees and staffing.

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### DFS not identifying amusement rides operating without permits

DFS has not established procedures to search for amusement rides operating without a state permit and to report these companies violating state law to the applicable county prosecuting attorney for enforcement of the penalty provision.<sup>6</sup> A division official stated some attempts have been made to identify rides operating in the state without a permit; however, structured procedures have not been implemented due to the lack of personnel and funding designated to the program.

We identified 15 amusement ride companies<sup>7</sup> operating rides without a permit. Company representatives contacted by DFS or SAO staff, responded they had been unaware of the state permit law or had failed to renew ride permits. In addition to the 15 companies, we identified 5 more companies that may be operating several rides without a state permit. DFS and SAO staff, made numerous attempts to contact the companies, but the companies did not return these calls.

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### Adequate spot inspection procedures not implemented

DFS's spot inspections of portable and fixed rides have focused on mechanical aspects of the rides. However, DFS has not considered operational safety concerns related to the rides. For example, DFS's inspection checklist has not included steps to evaluate ride operations, including compliance as required by state regulations<sup>8</sup> regarding ride operator and passenger requirements, and required passenger rule postings. State regulations restrict the location of ride operators when a ride is in use and requires operators to enforce guardian, height and weight requirements established by the manufacturer. Regulations also state a ride should not be operated unless safety rules and responsibility of riders have been prominently posted. We also found St. Louis County performs unannounced

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<sup>6</sup> Section 316.218, RSMo 2000, indicates operating an amusement ride in violation of Sections 316.203 to 316.233, RSMo 2000, is a Class A misdemeanor.

<sup>7</sup> We contacted 8 of the 15 companies and they operated 12 rides which included 115 go-carts, 23 bumper boats, a ferris wheel, and a gyroscope. Five of the 15 companies had licensed 9 rides with the division in 2003; however, they failed to renew the permits in 2004. The remaining two companies could not be contacted to obtain the number of rides that they operated.

<sup>8</sup> 11CSR 40-6-080 and 11CSR 40-6-085.



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operational inspections of rides which includes ensuring operators pay attention to rides and follow ordinances established by the county, according to a St. Louis County inspector. In responding to a draft of this report, the State Fire Marshal and other officials indicated the division has had to balance the management of safety issues with budget constraints and restrictions of current state law.

An Amusement Ride Safety Board member, who represents a permanent amusement company, addressed concerns that DFS had not been observing ride operations in its spot inspections at an October 2004 board meeting. He reported instances at the 2004 State Fair where rider and operator safety had been at risk, including instances in which (1) the operator had not been attending the control booth (where the power switch is located), (2) the operator's view of the ride had been impaired, and (3) height requirements of riders had been disregarded by the operator. In addition, auditors attending a local carnival observed passenger ride rules had not been posted for the four rides in operation. A DFS official told us the division had not considered including ride operation issues in the spot inspection process until the October 2004 board meeting.

DFS has not retained documentation of spot inspections performed. According to division officials, the number of spot inspections performed is reported on the DFS inspector's daily worksheet; however, the amusement company and rides inspected or any deficiencies found were not included on the worksheet. The revised state law allows DFS to conduct spot inspections, and division officials said they plan to perform more spot inspections in 2005. However, a division official stated funding and personnel restricts the division's ability to conduct spot inspections of all rides.

When we inquired whether local law enforcement and fire service agencies could assist the division in detecting operational problems, identifying unsafe rides, and non-compliance with state amusement ride laws and regulations, the Assistant State Fire Marshall stated utilizing these agencies had not been considered, but those organizations could be trained and used to assist DFS. He also stated DFS and other divisions of public safety provide training periodically to fire service and local law enforcement agencies. However, amusement ride safety training has not been provided to local law enforcement or fire service agencies since 2000, according to DFS.

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DFS lacks adequate procedures for handling complaints or periodically informing local agencies of reporting requirements

DFS has not established adequate procedures to receive, follow-up, or document complaints from the public. However, we found other states have established procedures for reviewing, tracking, and following up on complaints received. For example, North Carolina offers a toll-free number to the public to report complaints, and maintains a log of complaints received, which also documents follow-up action taken by this program on each complaint. DFS currently has a general purpose toll-free number, but has not promoted it for the purpose of obtaining public complaints. DFS also has a website and pamphlet addressing its responsibilities to regulate amusement rides; however, an email address had not been established to receive public complaints or questions. Moreover, neither the website nor pamphlet provide concerned citizens any instructions on how to contact DFS.

A DFS official told us less than five complaints had been received each fiscal year from the public and each complaint had been accident related. The official also stated a complaint process for the public has not been promoted because the division did not have the authority to follow-up on complaints unless they met Missouri's requirements for reporting accidents.<sup>9</sup> In responding to a draft of this report, the Assistant State Fire Marshall stated DFS attempts to minimize the number of complaints received because the division does not have the resources needed to receive and track complaints. We explained a procedure to obtain and document all citizen and local professional complaints or concerns is necessary to fully assess potential unsafe rides or amusement ride companies, and to comprehensively prioritize future spot inspections.

DFS also has not developed or established a method to periodically inform local law enforcement and fire service agencies regarding the requirements of reporting ride accidents or injuries to DFS.<sup>10</sup> A division official told us these agencies had been notified of reporting requirements in 2000 with the establishment of the program. However, no attempts have been made by the division to periodically contact the local law enforcement and fire service agencies regarding their reporting requirements because of the lack of funding and personnel. The division plans to re-notify the agencies of the 2005 changes in state law.

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<sup>9</sup> CSR 11 40-6.020 and CSR 11 40-6.045 only require accidents to be reported to DFS if there is a death or an injury requiring admission to the hospital, or if there are three or more persons injured and transported to the hospital for treatment.

<sup>10</sup> CSR 11 40-6.045 requires local law enforcement or fire service agencies to contact DFS when any serious physical injury, serious incident or any death occurs as a result of an amusement ride.

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Administrative and personnel costs, adequacy of permit fees, and staffing needs unknown

DFS has not adequately tracked administrative and personnel costs associated with the amusement ride program or performed an analysis of the adequacy of the permit fee. State law<sup>11</sup> allows the board to establish the permit fee based on actual administrative and personnel costs of the program and the board established the \$15 fee in 2001. The \$15 permit fee continues to be charged for each amusement ride.

DFS could not provide documentation of the total costs incurred during fiscal year 2004 to administer the amusement ride safety program. DFS provided us a listing of fiscal year 2004 program expenses. However, the listing did not include salaries and other personnel costs and some travel expenses. At our request, the division estimated the percentage of time each employee spent on the program, and our audit staff calculated the personnel costs associated with administering the program. Audit staff also identified additional travel expenses associated with the program during the course of our audit and included those costs in our calculation of program costs.

The program's administrative and personnel costs were determined to be about \$35,000 during fiscal year 2004. Officials estimated 1,000 amusement rides had been permitted during the fiscal year 2004. Based upon this information, we estimated a permit fee of \$35 would be needed to cover current administrative and personnel costs. After reviewing these calculations and discussing them with DFS officials, the board increased the fee to \$30 at the October 2004 board meeting. The \$30 fee will become effective in the spring of 2005. A DFS official stated the adequacy of permit fees had not been evaluated and costs of the program had not been tracked because funds had not been specifically designated to the program. Program costs will increase because the revised state law increases the division's duties.

According to the fiscal note prepared by division staff, two additional inspectors were requested for the fiscal year 2006; however, a division official said DFS does not plan to dedicate these inspectors full-time to the amusement ride safety program because of the seasonal nature of the amusement ride industry. DFS has not prepared a formal analysis of staffing needs to implement the increase in duties required by the revised law. Division officials acknowledged the two additional inspectors were not adequate to meet the increase of duties required by the new state law, and also stated an analysis of future staffing needs has not been performed because the effect of the revised law is not known. In response to a draft of this report, the State Fire Marshall and other officials told us budgetary

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<sup>11</sup> Section 316.210, RSMo 2000.

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constraints and political considerations impair the division's ability to obtain adequate funding for the program.

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## Missouri's Amusement Ride Safety Laws Are Lacking

Other states have stricter requirements for inspecting portable rides at each set up and reporting accidents and mechanical failures. In addition, current state law does not require owner-hired inspectors to be independent, and Missouri's amusement ride safety requirements are not all inclusive.

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### Portable rides not required to be inspected when set up

Missouri law does not require portable rides to be inspected at each set up to ensure the ride is operating safely and correctly. Missouri law only requires inspections to be performed annually on amusement rides operating within the state. According to DFS personnel, approximately 90 amusement companies, or 76 percent of licensed companies, operated 830 portable rides in the state during fiscal year 2004. These amusement companies traveled to various carnivals or fairs throughout the state and set up portable rides multiple times. We determined 13 of 28 states require an inspection of portable rides at each set up.<sup>12</sup> Most of these states employ state inspectors to conduct all inspections, while Missouri law provides for owner-hired inspections. St. Louis County also inspects portable rides at each set up, and a St. Louis County inspector expressed concern that rider safety has been at risk because DFS has not required inspections of portable rides at each set up. DFS officials told us portable rides have not been inspected at each set up because of a lack of funding and personnel.

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### Missouri's amusement ride safety requirements are not all inclusive

Our review of Missouri's, St Louis County's, and other states' amusement ride programs, identified other amusement ride safety requirements not addressed in Missouri's laws and regulations. For example:

- Regulating mechanical bull rides, inflatable equipment, or water slides. Four of nine states contacted regulate mechanical bull rides. See Appendix II for a listing of states that regulate inflatable equipment and water slides.
- Requiring owner-hired inspectors to provide proof of liability insurance to DFS. Current regulations only require proof of liability insurance to be filed with DFS for inspectors approved by DFS to inspect accidents or incidents.

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<sup>12</sup> Information was obtained from the CPSC report or through contacting the nine states identified in the audit methodology. The total number of states reporting varies from 28 to 32 due to some states not reporting all criteria to the CPSC.

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- Expanding regulations to require fire extinguishers near the proximity of a combustible area and fuel to be stored in containers designed and marketed for flammable liquids. Two of nine states contacted have similar regulations regarding fire extinguishers. In addition, Oklahoma and St. Louis County require fuel to be stored in containers designed for flammable liquids.

St. Louis County also requires:

- Areas where the public may be endangered to be fenced or barricaded, the interior and exterior parts of passenger-carrying rides to be free from sharp or rough edges, and any mountings that would entangle long hair to be guarded.
- Amusement rides not to exceed load and speed requirements recommended by the manufacturer.

Other states have stricter requirements for reporting accidents and mechanical failures

Our review of the CPSC report disclosed 17 of 32 states require accidents to be reported if medical attention beyond first aid is required. We also found other states, such as Maine and Michigan, have reporting requirements which provide for all ride accidents to be reported. However, Missouri regulations<sup>13</sup> only require accidents to be reported to DFS if there is a death or an injury requiring admission to the hospital, or if there are three or more persons injured and transported to the hospital for treatment. Missouri laws and regulations also do not require mechanical failures to be reported to DFS. Some states reviewed require mechanical failures on amusement rides to be reported to the regulating state agency.

State regulations have not required owner-hired inspectors to be independent

Current state regulations do not require owner-hired inspectors (other than those hired by DFS to inspect accidents or incidents) to be independent from the ride that is being inspected. A division official told us at least one owner-hired inspector, who also owns an amusement company, is inspecting his own rides. He also told us the division has not addressed independency requirements with the owner-hired inspectors because it is not required by state law.

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## Conclusions

DFS uses a permit process to ensure amusement rides meet nationally recognized safety standards. In reviewing DFS's permit and program oversight, we found weaknesses that undermine its ability to effectively minimize the risk of unsafe amusement rides. We believe DFS should establish procedures to identify unlicensed operators and report them to

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<sup>13</sup> CSR 11 40-6.020 and CSR 11 40-6.045.

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applicable county prosecuting attorneys. DFS also has not considered operational aspects during its spot inspections of portable and fixed rides and has not documented spot inspections. Operational requirements impact ride safety and therefore, are an important part of the state's amusement ride safety program. We believe operational requirements, as defined in state law, should be addressed and documented by DFS. Local law enforcement and fire service agencies could also be trained and enlisted to help identify operational and other safety concerns.

DFS also has not established adequate procedures to receive, follow-up, or document complaints from the public. We believe it is important for the public to be able to contact DFS with concerns regarding ride safety issues, which would also improve DFS's ability to monitor and assess the safety risk of amusement rides and to develop a comprehensive prioritization procedure for future spot inspections. DFS should enhance its efforts to publicize its toll-free number and website to provide greater access to DFS. DFS should also develop procedures to ensure local law enforcement and fire service agencies are informed of reporting requirements on a periodic basis.

DFS also has not adequately tracked administrative and personnel costs of the program. We estimated current administrative and personnel costs of about \$35,000 a year. Based on that information, the Amusement Ride Safety Board increased fees to be paid by amusement ride operators from \$15 to \$30 per ride beginning sometime in 2005. However, this increase likely will not be sufficient to cover all administrative and personnel costs since we estimated a fee of \$35 would be needed to cover current administrative and personnel costs. Our estimate also did not consider additional duties DFS will undertake for 2005, or any recommended actions included in this report. We believe DFS should establish a fee structure ensuring all administrative and personnel costs of the program are covered. Due to the revisions in the law, staffing resources should also be analyzed to determine the number of inspectors required to adequately conduct spot inspections and other personnel needs.

Missouri's law is not as strict and not as inclusive as other states' and St. Louis County's laws for amusement ride safety. Other states have stricter requirements for inspecting portable rides at each set up and reporting accidents and mechanical failures. State regulations have not required owner-hired inspectors to be independent. Therefore, an amusement ride owner could also be an inspector which presents a possible conflict of interest. We believe DFS should conduct a comprehensive review of inspection requirements and recommend enhancements to the General Assembly that balance costs with rider safety to strengthen the amusement ride safety program.

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## Recommendations

We recommend the Director of the Department of Public Safety:

1. Establish procedures to identify amusement rides operating without a state permit, and report violators to applicable county prosecuting attorneys.
2. Improve the ride safety program by:
  - Establishing spot inspection procedures that address operational requirements for rides and maintain documentation of the results of spot inspections.
  - Analyzing the cost-benefit of training and using local law enforcement and fire service agencies to assist in identifying and referring operational ride safety problems to DFS.
  - Establishing procedures that ensure all complaints are received, followed up, and documented. This includes enhancing efforts to increase the public's awareness of DFS's amusement ride safety program through its toll-free number and website.
  - Establishing a method to periodically inform local law enforcement and fire service agencies of their requirements to report ride accidents or injuries to DFS.
3. Track all program administrative and personnel costs and ensure ride permit fees cover all of these costs.
4. Conduct a comprehensive review of inspection requirements and recommend program enhancements to the General Assembly. This review should include addressing areas such as inspections of portable rides at each set up, strengthening requirements on the reporting of accidents and mechanical failures, and requiring owner hired inspectors to be independent. Other states' ride safety programs should be considered in this review.

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## Agency Comments

DFS's comments and our evaluation are included in Appendix III.

# Permitted Rides

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This appendix shows the total number of amusement companies that operated permitted rides in the 2003 and 2004 fiscal years. In addition, the table identifies the total number of rides owned by the companies each year that were portable and fixed.

**Table I.1: Ride Companies and Permitted Rides For Fiscal Years 2003 and 2004**

<b>Fiscal year</b>	<b>Number of amusement companies</b>	<b>Total rides permitted</b>	<b>Portable rides</b>	<b>Fixed rides</b>
2003	105	955	748	207
2004	119	1,048	830	218

Source: DFS.



# Rides Regulated by State

This appendix shows the types of amusement rides regulated in each state.

**Table II.1: Types of Rides Regulated by State<sup>1</sup>**

State	Carnival rides	Park rides	Inflatables (parks/carnivals)	Inflatables (rentals)	Go-karts	Bungee jumps	Water slides
Alabama	No	No	No	No	No	No	No
Alaska	Yes	Yes	Yes	No	Yes	Yes	Yes
Arizona	No	No	No	No	No	No	No
Arkansas	Yes	Yes	Yes	Yes	Yes	Yes	Yes
California	Yes	Yes	No	No	No	Yes	Yes
Colorado	Yes	Yes	NR <sup>2</sup>	NR	NR	NR	NR
Connecticut	Yes	Yes	No	No	No	No	Yes
Delaware	Yes	Yes	NR	NR	NR	Yes	NR
Florida	Yes	Yes	No	No	Yes	Yes	Yes
Georgia	Yes	Yes	No	No	Yes	Yes	Yes
Hawaii	Yes	No	Yes	No	No	No	No
Idaho	Yes	Yes	No	No	No	No	No
Illinois	Yes	Yes	Yes	No	Yes	Yes	Yes
Indiana	Yes	Yes	No	No	No	No	No
Iowa	Yes	Yes	Yes	Yes	Yes	Yes	No
Kansas	No	No	No	No	No	No	No
Kentucky	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Louisiana	Yes	Yes	Yes	No	Yes	No	Yes
Maine	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Maryland	Yes	Yes	Yes	No	Yes	No	Yes
Massachusetts	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Michigan	Yes	Yes	No	No	Yes	No	Yes
Minnesota	Yes	No	No	No	Yes	No	No
Mississippi	No	No	No	No	No	No	No
<b>Missouri</b>	<b>Yes</b>	<b>Yes</b>	<b>No</b>	<b>No</b>	<b>Yes</b>	<b>Yes</b>	<b>No</b>
Montana	No	No	No	No	No	No	No
Nebraska	Yes	Yes	No	No	No	Yes	No
Nevada	No	No	No	No	No	No	No
New Hampshire	Yes	Yes	Yes	No	Yes	Yes	Yes
New Jersey	Yes	Yes	Yes	Yes	Yes	Yes	Yes
New Mexico	Yes	Yes	No	No	Yes	Yes	Yes
New York	Yes	Yes	NR	NR	Yes	NR	Yes
North Carolina	Yes	Yes	Yes	Yes	Yes	Yes	Yes
North Dakota	No	No	No	No	No	No	No
Ohio	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Oklahoma	Yes	Yes	Yes	Yes	Yes	Yes	No
Oregon	Yes	Yes	No	No	No	Yes	No

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**Appendix II**  
**Rides Regulated by State**

<b>State</b>	<b>Carnival rides</b>	<b>Park rides</b>	<b>Inflatables (parks/carnivals)</b>	<b>Inflatables (rentals)</b>	<b>Go-karts</b>	<b>Bungee jumps</b>	<b>Water slides</b>
Pennsylvania	Yes	Yes	Yes	Yes	Yes	Yes	NR
Rhode Island	Yes	Yes	No	No	Yes	No	No
South Carolina	Yes	Yes	No	No	Yes	Yes	No
South Dakota	No	No	No	No	No	No	No
Tennessee	No	No	No	No	No	No	No
Texas	Yes	Yes	Yes	No	Yes	Yes	Yes
Utah	No	No	No	No	No	No	No
Vermont	Yes	Yes	NR	NR	NR	Yes	NR
Virginia	Yes	Yes	No	No	Yes	Yes	Yes
Washington	Yes	Yes	Yes	Yes	No	Yes	No
West Virginia	NR	NR	NR	NR	NR	NR	NR
Wisconsin	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Wyoming	No	No	No	No	No	No	No

<sup>1</sup>The CPSC report did not include regulation of bull rides.

<sup>2</sup>No response (NR) from the state.

Source: CPSC Report.

# Agency Comments and Our Evaluation

**MATT BLUNT**  
Governor

**CHARLES R. JACKSON**  
Interim Public Safety  
Director

**WILLIAM FARR**  
State Fire Marshal



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**DEPARTMENT OF PUBLIC SAFETY**  
**DIVISION OF FIRE SAFETY**

January 27, 2005

Kirk R. Boyer  
Director of Performance Audits  
Room 880 Truman Bldg.  
Jefferson City, MO 65101

Dear Mr. Boyer:

The Division of Fire Safety Administration and Amusement Ride Safety/Elevator Safety staffs have reviewed the Draft Report of State Auditor's Officer Performance Audit of the Amusement Ride Safety Program. On Friday, January 21<sup>st</sup>, the Division respectfully submitted a response to the draft. Now, as requested, we are formally submitting this signed and dated letter to accompany our response.

If you have any questions, or need anything further, please do not hesitate to contact me at 751-2930.

Sincerely,

A handwritten signature in cursive script, appearing to read "William Farr".

William Farr  
State Fire Marshal

Fire Investigations • Boiler & Pressure Vessel Inspections • Elevator Safety • Fire Fighter Training • Fire Safety Inspections  
Public Education • Fire Incident Reporting • Fireworks Licensing • Amusement Ride Safety • Private Fire Investigator Licensing

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***Division of Fire Safety  
Response to Recommendations Sited  
January 2005  
State Auditor's Draft Report  
Oversight of the Amusement Ride Safety Program***

The Division of Fire Safety Administration and Amusement Ride Safety/Elevator Safety staff have reviewed the State Auditor's draft report of the Amusement Ride Safety Program and respectfully submit the following response.

It should be noted that upon notification this audit was being scheduled, Division staff advised the Auditor's staff that since the audit conducted in November of 2002, nothing within RSMo Chapter 316 had changed. In 2002, the Division provided input to the sponsor of HB1434 that required annual inspections and issuance of state operating permits in addition to the creation of the Amusement Ride Safety Board. Then, in 2004, HB1403 made additional changes to Chapter 316 with the Division providing input to the bill's sponsor by establishing a "spot" inspection procedure by the Division. The audit staff was informed that program changes would be made after the effective date of HB1403 in January of 2005.

The majority of the "weaknesses" cited in the current audit are outside the scope of Chapter 316 during the time period covered by the audit.

***1. Regarding DFS not actively searching for amusement rides operating without permits.***

As told to the audit staff and documented in the 2002 Division audit response, the Division of Fire Safety staff has indeed made attempts to search for rides operating without permits. Because the Division has not been allocated any full time positions with this program, our procedure is to utilize current field staff to assist with locating rides not permitted. Fourteen Fire Safety Inspectors and nineteen Fire Investigators are strategically located throughout the State. In the performance of their normal work duties, these employees remain alert for fairs or carnivals playing in their assigned areas, particularly during the spring and summer months. When they locate rides operating, they then verify they have the state operating permit.

Additionally, the Division has notified local law enforcement and the fire service of the Amusement Ride Safety Act and the Division's oversight role. In addition to two informational/training sessions held in 2000, the Division has posted information regarding the Division's responsibilities and the Act on our website, as well as in various brochures distributed at major fire service and public safety events. Due to the distributed information, local officials have periodically contacted our office to verify fairs and carnivals playing within their jurisdictions have the necessary state issued permits. In fact,

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because of these efforts, coupled with those of our field staff, a number of rides operating without permits have been discovered and not allowed to operate until a permit was obtained.

It is imperative to note the Division of Fire Safety was not appropriated any FTEs or funding to administer the Amusement Ride Safety program. Since the creation of this law in 1997, the Division has requested clerical support to manage the documentation associated with the program and has been denied. Due to the passage of House Bill 1403 of the 2004 legislative session, the Division is requesting field support in the FY06 budget. At this time, considering the lack of funding, we feel our efforts in searching for rides without permits have been more than adequate.

**2. Regarding spot safety inspection procedures, documentation and assistance:**

The audit report claims the Division of Fire Safety has neglected to conduct spot mechanical inspections of amusement rides. What the report fails to note, however, is that the Division did not have clear statutory authority to conduct these inspections during the period covered in this audit. As told to the audit staff, the spot safety inspection authority was not granted until the passage of House Bill 1403 in the 2004 legislative session which did not become effective until **January 1, 2005**. The Division is currently in the process of developing the procedures and requirements for comprehensive spot safety inspections. When implemented, detailed checklists and documentation will be maintained. However, the ability to perform comprehensive spot inspections will be limited until adequate funding and personnel are approved through the budget process.

In response to the 2002 audit recommendation the Division of Fire Safety established procedures to review the quality of inspections performed by state approved amusement ride inspectors. Without funding, designated personnel, or a statutory obligation, in 2003 and 2004 the Division conducted periodic "quality review" inspections of rides in an attempt to ensure state approved inspectors were conducting thorough and adequate safety inspections. These reviews were conducted by inspectors assigned to the Elevator Safety Unit who also possessed the necessary qualifications needed to inspect amusement rides. Audit staff were provided with specific instances where Division staff witnessed rider safety and mechanical violations which they insisted be corrected. In fact, several rides at the 2003 and 2004 State Fairs were not permitted until they met the requirements imposed by our staff. Due to corrective action required onsite prior to the ride being allowed to operate, no documentation was needed.

The audit report also states the Division of Fire Safety has not considered operational safety concerns. In fact, Chapter 316 does not authorize the

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Division itself to conduct operational inspections. Operational safety is to be addressed within the inspection process by the third party inspectors and is not statutorily mandated to the Division. The Division has, however, considered operational guidelines, and in 2000 promulgated an administrative rule to provide standards for ride operators, owners, and third party inspectors (see 11 CSR 40-6.080). Safety inspections conducted by third party inspectors are to be conducted to nationally recognized standards and manufacturer's guidelines. As of January 2005, the Division has authority to conduct spot mechanical inspections which will include issues associated with operational safety. It should be noted, however, that unless the Division's FY06 budget request for two FTE is approved, the Division's ability to conduct inspections will be limited.

Next, the audit report appears to suggest that the Division should be enlisting local law enforcement and fire service agencies to assist in detecting amusement ride operational problems, unsafe rides, and non-compliance with state amusement ride laws and regulations. This comment reflects a lack of understanding of the technical and practical issues associated with amusement ride safety enforcement. Due to the technical and mechanical knowledge necessary to detect problems on rides, one cannot assume that local law enforcement and fire officials are qualified to inspect rides, and in fact, those serving without a local ordinance would have no authority to do so. As for practical issues, local law enforcement and fire service agencies are already obligated to their own locally-mandated duties. In addition, in many jurisdictions the fire service agency is staffed by volunteers who are only deployed in emergency situations. Further, these local agencies have no obligation to assist the Division in enforcing the Amusement Ride Safety Act. As an example, St. Louis County officials have specifically advised that they have no authority to require a state operating permit be obtained before allowing a particular amusement ride to operate in their jurisdiction, nor do they provide information to the Division when rides are found in their area operating without a state permit.

Finally, the Division of Fire Safety has provided programs to local fire service agencies who have requested training in identifying potential amusement ride safety issues. The Division also works with local authorities to ensure that amusement rides have the proper state permits.

3. Regarding adequate procedures for handling complaints or informing local agencies of reporting requirements.

Although Chapter 316 does not specifically provide requirements concerning safety complaints of amusement rides, the Division of Fire Safety does receive and respond to complaints. The Division of Fire Safety has had a toll free number since the early 80's, a website since the mid 90's and has published hundreds of pamphlets over our 30 year history. Additionally, the

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staff attend schools, conferences, trade shows, and events where our contact information is distributed freely. We participate in a list-serve that includes all the fire department instructors in the state, and another that includes all the fire service organizations in Missouri. In every efficient way feasible, the Division has made attempts to make the general public, the amusement ride industry and the local officials aware of the law and the Division's oversight of the law. Direct links to the law and applications are provided on our website, as is a direct email link for questions.

Again, to ensure a degree of public safety when information is received by the Division in relation to safety concerns, the Division assigns staff to determine the validity of the information and direct corrective action be taken if warranted. Information has been documented and follow up interviews have been conducted concerning accidents on an amusement ride even when the accident does not fall within the scope of Chapter 316 in relation to the degree of the injury. Again, this action has been taken by the Division to ensure public safety is being maintained.

Without adequate staffing to address complaints from the public the Division has not outwardly promoted any specific avenue for encouraging public complaints. However, any safety concern reported to the Division has been investigated to determine validity and if necessary require corrective action be taken before the ride continues to operate in Missouri.

As mentioned above, local officials were notified of the Amusement Ride Safety Act and the Division's oversight of the program. The Division has conducted informational and training sessions for interested individuals at the local level. Because the law only recently changed, further notification/training has not been conducted. With the new requirements becoming effective in January 2005, the Division will be informing local officials of the law changes and the Division's additional responsibilities. The website has also been updated reflecting the changes.

#### 4. Regarding administrative cost, adequacy of permit fees and staffing needs unknown.

The draft is incorrect. The Division has tracked the expenses of this program for each year since implementation including all expense and equipment purchases and Board expenses. This information was provided to the audit staff. Due to the fact no spending authority or FTE were granted with the program, these expenses have been very limited to say the least. All costs associated with operating this program have been absorbed within the Division's core budget. At the time the Board established the \$15 permit fee in 2001, the Division was using existing staff and incurred \$1138 in expenses. The Division would not have been able to justify higher fees in the initial phases of this program when costs were minimal and no FTE's were

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appropriated. Of course, with the law changes, the cost of the program will eventually rise, thereby dictating a fee increase to support growing costs and new FTE. In fact, as a result of the analysis conducted during the audit, the Board recently approved a permit fee of \$30 pending adoption of revised promulgated rules.

To say a formal analysis of staffing needs in response to the revised law has not been done is also incorrect. The Division prepared as many as six fiscal notes during the 2004 legislative session and worked closely with the bill sponsors to ensure the program needs were met while covering costs. As mentioned to the audit staff, funding for the program is shifting to the Elevator Safety Fund (0257) due to the passage of HB1403.

The Division also submitted a very detailed "formal" budget request for FY06 relating to this program which was also provided to the audit staff. It is true the individuals requested would not be solely dedicated to the Amusement Ride Safety program. Because it is a seasonal program, these individuals would be utilized in the Elevator Safety program during the winter months. The Division, the legislature, and budget and planning officials saw this as being efficient and responsible.

5. In regards to Missouri's Amusement Ride Safety laws:

To say Missouri's laws are lacking is matter of opinion of the audit staff. While it is true that some other states have stricter laws on various types of rides, overall Missouri's revised law is far more stringent than others. Division staff has researched countless other states' laws and procedures when working on House Bill 1403 and injected wording and procedures into the draft of the proposed bill. As is listed in the audit report, twenty states do not yet regulate bungee jumps, thirteen do not regulate park rides, and eleven other states have **no program at all**. In the 2004 legislative session, the Division made great strides in ensuring public safety with the adoption of House Bill 1403, broadening the definition of rides, allowing for spot safety inspections and toughening requirements of owners.

The Division is currently looking at implementing a rule that will require the ride inspectors to be independent of the ride owners. Therefore, an inspector who owns rides will be required to hire a third party inspector.

In summary, the audit report ignores the initiatives taken by the Division of Fire Safety to oversee a program with absolutely no appropriated resources. Upon passage of the 1997 statute, the Division took a proactive approach to administering this law. To become more familiar with amusement ride inspections, the Division obtained training from a nationally recognized amusement ride inspection program for two Division personnel. Additionally, division staff have attended various meetings and conferences of the Amusement Ride Industry. Current Administrative Support Assistant has



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assumed the accounting and issuance of the program along with her other job duties. Up to and including present day, monies to support the Amusement Ride Safety Act have been from the Division's core budget, despite core cuts and withholdings.

Although no funding or FTE's were provided with this legislation, the Division of Fire Safety has carried out every requirement of the statute in enforcing this program and in many instances went above and beyond in the interest of public safety. The Division has actively investigated reports of rides operating in Missouri that have not complied with annual inspection requirements to obtain state permits. We have handled every complaint or concern seriously and aggressively.

Lastly, the Division's oversight of this program will be greatly improved after the new law becomes effective and the FY06 budget request is approved; both of which will assist the Division in administering the Amusement Ride Safety Program with the authority and resources needed.

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DFS stated it has taken a proactive approach to administering the law within its funding constraints, the division went above and beyond that required of it, handled every complaint or concern received, and its oversight of this program will be greatly improved after the new law becomes effective and the fiscal year 2006 budget request is approved. We acknowledge in the report that DFS has provided some oversight to this program. We also believe it is a positive step to engage fire safety inspectors and investigators in the oversight of this program, but as we also point out, the day-to-day demands placed on the division make it difficult for it to maintain the oversight, focus, and momentum needed to effectively minimize the risk of unsafe amusement rides. In addition, our recommendations are designed to help strengthen the division's oversight by providing clearly defined procedures expected by division staff and processes to engage local officials and citizens in this endeavor. In part, weaknesses in the division's oversight stem from the number of companies operating rides without permits in Missouri that we identified with minimal effort.

DFS acknowledged, to a large extent, its efforts, including spot inspections, have been limited due to staffing and funding constraints. During our discussion with the Assistant Fire Marshal, he told us it would not be fiscally responsible to assign full-time inspectors to this program given its seasonal nature, and the division had not determined how many inspectors may be needed until the full ramifications of the revised law were known. We concurred with this approach, but continue to believe an overall staffing and resource analysis will be needed to recommend cost-effective program enhancements to the General Assembly to strengthen the amusement ride safety program.

Regarding spot inspections, DFS states the report fails to note the division did not have clear statutory authority to conduct these inspections. We believe this is a fundamental and vital element of the division's oversight responsibility to ensure it detects and appropriately resolves all potential risks resulting from unsafe amusement rides. We are encouraged the division is implementing our recommendation to establish procedures for conducting and documenting spot inspections. However, in developing these procedures, we believe it is imperative to also establish mechanisms to ensure all citizen and local professional concerns or complaints are received, documented, and used to assess potential risks, and to prioritize spot inspections. A comprehensive prioritization procedure for future spot inspections is particularly important given the limited division resources.

DFS also stated enlisting local law enforcement and fire service agencies to assist in detecting amusement ride operational problems, unsafe rides, and non-compliance with state amusement ride laws and regulations reflects a

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lack of understanding of the technical and practical issues associated with this program. On the other hand, DFS provided a contradictory position when responding to our first recommendation. DFS acknowledged that local law enforcement and fire service agencies have assisted it in its oversight, and helped discover a number of rides operating without a permit and not allowed to continue operating. This is the type of local and state cooperation we envision occurring on a greater scale with improved procedures.

DFS stated our draft is incorrect regarding its tracking of administrative and personnel costs. We disagree with DFS's comments on this point, because, as we discuss in the report, audit staff worked with division staff to develop comprehensive program costs including personnel and training expenses. We agree program costs will likely increase with additional oversight responsibilities promulgated under the revised law. However, the increased permit fee of \$30 is based on fiscal year 2004 costs required to administer the prior law, and we continue to believe our recommendation to track all administrative and personnel costs is pertinent to future revisions in the permit fee under the revised law.